

### **REMARKS**

Applicant thanks the Examiner for the courtesy of a telephone interview on August 8, 2007. The Examiner and Applicant's representative, William Guerin, discussed U.S. Patent No. 5,812,312 (hereafter "Lorincz") with respect to the rejection of independent claim 14 under 35 U.S.C. 103(a) according to the Office Action mailed May 16, 2007 and discussed the nature of a potential claim amendment for independent claim 14.

Claims 14-19 and 23-35 were pending in the application at the time of the mailing of the present Office Action. The Office Action rejects claims 14-19 and 23-35. This paper amends claims 14, 15, 23, 25, 28 and 30. Claims 14-19 and 23-35 remain pending in the application and are presented for examination. Applicant requests that the Examiner call the Applicant's representative, William Guerin, at (508) 303-2003 prior to the issuance of any responsive written communication to discuss the claim amendments made herein if the Examiner deems that the claims as now set forth are not allowable.

### **Rejection of Claims 15, 23 and 24 under 35 U.S.C. § 112**

The Office Action rejects claims 15, 23 and 24 under 35 U.S.C. §102(b), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action states that claims 15, 23 and 24 are indefinite because the structural cooperation between additional "base film" and the other recited elements cannot be clearly determined. Applicant herein amends claim 15 to replace "further comprising a base film" with "wherein said micro-pattern embedded plastic optical film further comprises a base layer." Claim 23 is amended herein to replace "base film" with "base layer" for proper antecedent basis. Applicant submit that these amendment properly address the rejection of claims 15, 23 and 24 under 35 U.S.C. §102(b) and respectfully requests withdrawal of the rejection.

**Rejection of Claims 14, 16-19 and 25-35 under 35 U.S.C. § 103(a)**

The Office Action rejects claims 14, 16, 19 and 23-35 under 35 U.S.C. § 103(a) as being unpatentable over Lorincz in view of German patent document no. DE 19952139 (hereafter “Weiner”) or U.S. Patent No. 6,597,500 (hereafter “Burke”). The Office Action rejects claims 17 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Lorincz in view of Weiner or Burke, and further in view of U.S. Patent Publication No. 2002/0072113 (hereafter “Barbera-Guillem”). Applicant respectfully traverses these rejections to the extent they are maintained against the claims as amended herein because the cited references, either alone or in combination, do not teach or suggest each and every element of Applicant’s claimed invention.

Applicant’s invention relates to a micro-pattern embedded optical film for cell-based assays. The optical film includes microscopically observable regions formed by contrast features having small depths or heights (e.g., less than five microns). The film is attached to at least one supporting component which provides mechanical strength for handling either manually or robotically. Additionally, the supporting component forms one or more volumes for holding a liquid containing the cells to be observed and also provides liquid containment for chemical reagents necessary for the cell-based assays. The liquid containing the cells can be applied to the film after the film is attached to the supporting component. Unlike conventional grids, the contrast features of the micro-pattern embedded optical film do not adversely influence the growth and mobility of cells due to their small depth or height. A user of the device of the invention can observe the cells and the contrast features simultaneously, i.e., without the need to refocus.

Applicant’s invention as now set forth in representative claim 14 recites, in part, “a supporting component bonded to said micro-pattern embedded plastic optical film to form, in combination with said micro-pattern embedded plastic optical film, a volume configured to receive and hold a liquid having said cells.”

Lorincz discloses a self-staining microscopic slide for staining and viewing of cells in biological fluid and tissue samples. The slide includes a viewing area in which a dye is applied.

The slide is overlaid with a transparent tape or film that can be peeled back to enable a sample to be applied to the viewing area as shown in FIGS. 2 to 4. Lorincz shows in FIGS. 3 and 4, and describes in column 5, lines 28-32, a microscopic slide having a well that can have culture media; however, the disclosed film has no part in forming the volume defined by the well. Thus the volume that holds the cells is not defined by the combination of the slide and the film. Moreover, the volume defined by the well is not accessible when the slide is combined with the film therefore one cannot apply a liquid having cells into the volume when the slide is bonded to the film. Thus Lorincz does not disclose a supporting component bonded to the film to form, in combination with the film, a volume configured to receive and hold a liquid having cells. In addition, one of skill in the art would not be motivated to modify the structure disclosed by Lorincz to Applicant's configuration as recited in claim 14 as Lorincz's film is intended to protect the viewing area containing the stain by preventing access to the well/viewing area. Consequently, Lorincz does not teach or suggest each and every claimed limitation of Applicant's invention as recited in representative claim 14.

Weiner and Burke are cited in the Office Action as disclosing microscope reference or sizing grid with unique identifiers. Barbera-Guillem is cited in the Office Action as disclosing that the use of a variety of adhesive is known in the art for attaching a film to a substrate within an optical observation device. Applicant submits that Weiner, Burke and Barbera-Guillem also fail to teach or suggest a supporting component bonded to the film to form, in combination with the film, a volume configured to receive and hold a liquid having cells as recited in representative claim 14.

As none of the cited references teach or suggest each and every claimed limitation of independent claim 14, Applicant respectfully requests that the rejection of claim 14 be withdrawn. Independent claims 25, 28 and 30 recite similar language to representative claim 14 and therefore are patentable over the cited references at least for the same reasons as provided for claim 14 above. Dependent claims 16-19, 26, 27, 29 and 31-35 depend directly or indirectly from independent claims 14, 25, 28 and 30, and incorporate all of the limitations of their

respective base claims, and are therefore also patentable over the cited references for at least the reasons set forth above.

### **CONCLUSION**

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

In view of the remarks made herein, Applicant submits that the application is in condition for allowance and request early favorable action by the Examiner. Applicant requests that the Examiner call the undersigned at (508) 303-2003 prior to the issuance of any written communication responsive to this paper to discuss the claim amendments made herein if the Examiner deems that the claims as now set forth are not allowable.

Respectfully submitted,

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